

THE CLAIMS:

Please amend the claims as set out in the following listing of the claims. This claim listing replaces and supersedes all prior listings of the claims.

Claims 1-20 (Cancelled)

21. (New) A system for defining internal variables embedded in an instrument that govern the operation of the instrument, comprising:

means for defining a range of values of a first variable corresponding to one or more physical restraints of a corresponding physical structure of the instrument;

means for selecting a value for the first variable;

means for confirming the selected value for the first variable is within the defined range of values;

means for storing the value of the first variable;

means for changing the value of the first variable;

means for confirming the changed value of the first variable is within the defined range of values of the first variable;

means for designating a second variable that is to be evaluated in accordance with a change in the first variable;

means for modifying a predetermined second variable in accordance with the changing of the value of the first variable; and

means for confirming that the changed value of the second variable is within an allowed range of values of the second variable corresponding to one or more physical constraints of a corresponding physical structure of the instrument.

22. (New) The system of claim 21, wherein the first and second variables are part of a group of variables having the same value ranges.

23. (New) The system of claim 22, wherein a change in the range of variables for the group of variables results in a change in the range of the corresponding values for the first and second variables in the group.

24. (New) A system for defining internal variables embedded in an instrument that govern the operation of the instrument, comprising:

means for defining a range of values of a variable corresponding to one or more physical restraints of a corresponding physical structure of the instrument;

means for selecting a value for the variable;

means for confirming the selected value for the variable is within the defined range of values; and

means for storing the value of the variable.

25. (New) The system of claim 24, wherein the variable is part of a group of variables having the same value ranges; and

wherein a change in the range of values for the group of variables results in a change in the range of the value for the variable.

26. (New) The system of claim 24, further comprising means for transferring the value of the variable to a second system.

27. (New) The system of claim 26, wherein the second system defines a range of values for the transferred variable that is different than the range of values of the variable defined by the first system.

28. (New) A method for defining internal variables embedded in an instrument that govern the operation of the instrument, comprising the steps of:

defining a range of values of a first variable corresponding to one or more physical restraints of a corresponding physical structure of the instrument;

selecting a value for the first variable;

confirming the selected value for the first variable is within the defined range of values;

storing the value of the first variable;

changing the value of the first variable;

confirming the changed value of the first variable is within the defined range of values of the first variable;

designating a second variable that is to be evaluated in accordance with a change in the first variable;

modifying a predetermined second variable in accordance with the changing of the value of the first variable; and

confirming that the changed value of the second variable is within an allowed range of values of the second variable corresponding to one or more physical constraints of a corresponding physical structure of the instrument.

29. (New) The method of claim 28, wherein the first and second variables are part of a group of variables having the same value ranges.

30. (New) The method of claim 29, wherein a change in the range of variables for the group of variables results in a change in the range of the corresponding values for the first and second variables in the group.

31. (New) A method for defining internal variables embedded in an instrument that govern the operation of the instrument, comprising the steps of:

defining a range of values of a variable corresponding to one or more physical restraints of a corresponding physical structure of the instrument;

selecting a value for the variable;

confirming the selected value for the variable is within the defined range of values; and

storing the value of the variable.

32. (New) The method of claim 31, wherein the variable is part of a group of variables having the same value ranges; and

wherein a change in the range of values for the group of variables results in a change in the range of the value for the variable.

33. (New) The method of claim 31, further comprising the step of transferring the value of the variable to a second system.

34. (New) The method of claim 33, wherein the second system defines a range of values for the transferred variable that is different than the range of values of the variable defined by the first system.

35. (New) An internal variable embedded in an instrument that governs the operation of a portion of the instrument, comprising:

a predetermined range of values for the variable corresponding to one or more physical restraints of a corresponding physical structure of the instrument; and

a value stored for the variable, the value corresponding to an operating parameter of the corresponding physical structure of the instrument;

wherein if the value for the variable is determined to be outside of the predetermined range, the variable is not set to the stored value.

36. (New) The internal variable of claim 35, wherein a change in the value of the variable indicates that a change in another variable is required.

37. (New) The internal variable of claim 35, wherein when the value for the variable is determined to be outside of the predetermined range, another value is requested for the variable.

38. (New) The internal variable of claim 35, wherein the predetermined range of values comprises an optimum operating range for the corresponding physical structure of the instrument.